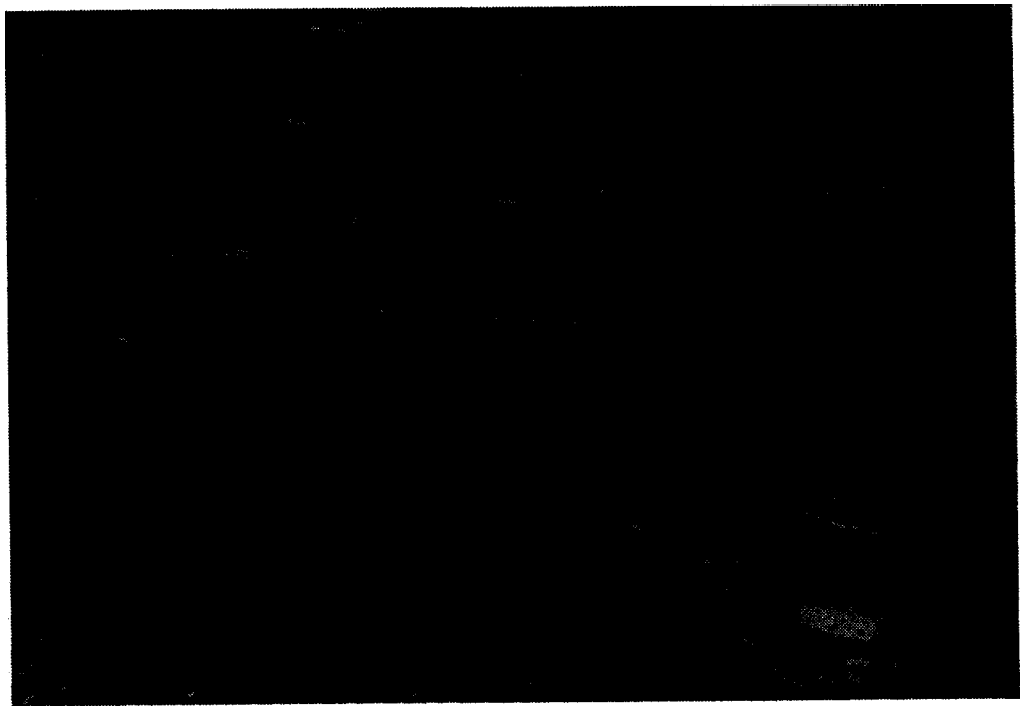
# HAGERMAN HATCHERY
# ANNUAL REPORT

**October 1, 1985 to September 30, 1986**



**by**
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**Fish Hatchery Superintendent III**

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**ABSTRACT**

The hatchery planted 2,492,275 trout weighing 432,208 pounds.

Six hundred twenty four thousand (624,000) pounds of feed were fed with a conversion of 1.44 pounds of feed to produce a pound of fish. The total expenditure for the year excluding capital outlay was $303,518. The cost/pound of fish produced was 70 cents.

The hatchery participated in jaw tagging 5,000 fish for a growth study at the Bell Rapids area of the Snake River. A study was conducted during the summer to attempt to determine the source of PKD.

An estimated 50,000 people came to fish, hunt, picnic, and visit.

Author:

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Fish Hatchery Superintendent III

## INTRODUCTION

Hagerman Hatchery is a state-owned trout facility located three miles south of Hagerman, Idaho. The water supply consists of Tucker Springs and Riley Creek. These two sources provide 115 cfs of water. Approximately 50 cfs comes from Tucker Springs and 65 cfs from Riley Creek. The Riley Creek water varies somewhat in quality. Quality varies by weed growth during the heat of summer. Temperature is affected by summer heat to 65°F and winter cold to 54°F.

Staffing consists of a manager (Superintendent III), assistant manager (Superintendent II), and two fish culturists. One temporary laborer is hired for eight months of the year. There are five residences and one temporary quarters building on the hatchery. Two of the residences are combined in a duplex. Other structures include a hatch house with 28 cement start tanks, and an attached office. A crew room, storage room, and shop are combined in one building. A Quonset storage building; four bulk feed bins, a visitor's toilet facility, a four-stall garage, and water chiller, plus other buildings on the Wildlife Management Area (WMA).

Hagerman Hatchery has been the state's largest trout producer for years. The hatchery was constructed in 1947, and later enlarged. The hatchery is capable of producing up to 500,000 lb. of trout annually. Incubation capacity is 1,100,000 eggs at present. This could be increased by constructing more incubators. Upwell incubators are the hatchery's method of choice. Presently, there are 22 in use.

Early in rearing in the hatchery building consists of 28 concrete vats 15 ft. x 32 in. x 27 in. A total of 1,100,000 fry are held in the starting tanks to approximately 500/lb. Only spring water is used for incubation and early rearing. There are 18 raceways 104 ft. x 45 in. x 27 in. Each raceway operates on approximately 175 gpm. These raceways are used for increasing early rearing capacity and for rearing the fish to a larger size prior to ponding in the large production raceways.

There are 24 large raceways used for annual fish production. These raceways vary in size. Measurements are:

four - 570 ft. long x 6 ft. wide x 37 in. water depth (WD)
four - 570 ft. long x 8 ft. wide x 37 in. water depth
eight - 570 ft. long x 12 ft. wide x 37 in. water depth
eight - 570 ft. long x 15 ft. wide x 37 in. water depth

The limiting factor for increased production at Hagerman is the water. We are presently using all water available to us. The hatchery is presently producing the required amount of fish to fulfill its role in the statewide management program.

## OBJECTIVES

1. To raise 2,875,000 rainbow, Kamloops, and brown trout for streams, lakes, and reservoirs throughout Idaho.

2. To assist in increasing, or maintaining, harvest levels and populations of these species for fishing in all waters of the state.

## FISH PRODUCTION

### Rainbow Trout

Rainbow trout was the primary species reared at the Hagerman Hatchery. The primary fish stock used was R4 rainbow, purchased from Mt. Lassen Trout Farm, California. Shasta rainbow (R5) eggs were received from Ennis, Montana. Other stocks received in lesser numbers were R1, RA, and R8. These latter stocks came in as small fingerlings, to help make up for losses suffered from virus outbreaks. These fish were transferred from American Falls and Eagle hatcheries. They were reared and planted from Hagerman as both catchables and fingerlings. The hatchery planted 1,941,354 rainbow, weighing 418,602 lb.

The hatchery received 4,806,242 eggs from Mt. Lassen, California, and Ennis (NFH), Montana. There were 138,000 fingerlings transferred to the hatchery from Eagle Hatchery. There were 182,618 fingerlings transferred in from American Falls Hatchery, and 3,000 fingerling brown trout brought in from Mackay Hatchery.

At the start of the year, there were 2,041,686 fish, weighing 94,812 lb.; and the year ended with 1,314,346 fish, weighing 56,475 lb.

### Kamloops Trout

There were 1,523,424 K1 eggs received from Skanes Trout Farm, Moses Lake, Washington, and 125,816 K2 eggs were received from Ennis NFH, Montana.

The Hagerman Hatchery reared and stocked 463,272 K1 Kamloops, weighing 11,260 lb. We stocked 24,335 K2 Kamloops, weighing 1,550 lb.

### Brown Trout

The hatchery received 83,025 fingerling brown trout from the Mackay Hatchery, and planted all of them at a total weight of 796 pounds.

## FISH HEALTH

The major diseases at the hatchery this year were infectious hematopoetic necrosis (IHN) and infectious pancreatic necrosis (IPN). Approximately 1.5 million fish were lost from these viruses. Approximately 224,000 fish were lost to bacterial gill disease, columnaris, and bird depredations. PKD was also found, although no large losses could be attributed to this organism. There is no known treatment for viruses. We try to avoid stressing the fish and sterilize the raceways when they are empty.

Losses were experienced from herons, kingfishers and ducks, but primarily from the ducks. They occur in large numbers due to the wetlands associated with the adjacent WMA. Their proximity, and shortages of adequate bird screen and fencing, make them a large problem. They not only eat the fish, but introduce disease into the ponds. Mallards, the greatest offenders, are very bold, and use the raceways as they would a farm pond. Observations have been made of these ducks eating and flying with six-inch fish. The bird wires are almost 100% effective in keeping gulls from the raceways. They are quite effective with the herons also, but very ineffective with the ducks. The ducks walk in from the sides and the ends, and they will fly in and out through the overhead wires. Moving the wires closer together might discourage their intrusions.

## FISH TRANSFERS

There were no transfers of fish from Hagerman to other hatcheries within the state this year. Some fish were transferred to Hagerman from Eagle, American Falls, and Mackay. Transfers were as follows:

| | |
|---|---|
| Eagle to Hagerman | 138,000 R1 rainbow |
| American Falls to Hagerman | 182,618 R8 rainbow |
| Mackay to Hagerman | 83,025 brown trout |

## SPAWN-TAKING OPERATIONS

Hagerman Hatchery equipment and personnel were involved in the installation and removal of the kokanee salmon trap on the South Fork Boise River. The trap is stored during the off-season at the Hagerman Hatchery. Few fish were trapped this season due to the small size of the run. No eggs were taken from this facility for the same reason. The fish were allowed to pass and spawn naturally. The trap was used only as a counting facility.

## FISH RELEASES

The following chart shows the number and pounds of each species of fish planted in each region of the state from the Hagerman Hatchery:

| Region | Species | Number | Pounds |
|---|---|---|---|
| 1 | Rainbow trout | 37,620 | 10,740 |
| | K2 Kamloops trout | 24,335 | 1,550 |
| 2 | Rainbow trout | 48,540 | 16,200 |
| 3 | Rainbow trout | 195,959 | 59,640 |
| 4 | Rainbow trout | 906,329 | 177,059 |
| | Brown trout | 83,314 | 796 |
| | K1 Kamloops trout | 463,272 | 11,260 |
| | K1 Kamloops trout | 86,800 | 1,400 |
| 5 | Rainbow trout | 216,361 | 62,035 |
| 6 | Rainbow trout | 377,060 | 79,400 |

## FISH FEED UTILIZED

The fish feed used was purchased from Clear Springs Trout Company and Rangen's of Buhl, Idaho.

| Size | Pounds | Cost |
|---|---|---|
| Starter | 300 | 87.75 |
| No. 1 | 2,850 | 6,552.63 |
| No. 2 | 11,350 | 3,145.75 |
| No. 3 | 22,950 | 6,349.00 |
| No. 4 | 43,190 | 7,262.83 |
| No. 5 | 38,040 | 7,278.48 |
| 3/32" pellets | 22,070 | 3,643.80 |
| 4/32" pellets | 474,692 | 75,032.69 |
| Medicated feed - TM-50 | 8,730 | 3,529.40 |
| Total number of pounds of feed | | 624,172.00 |
| Total cost of the feed | | $112,882.33 |
| Number of pounds of fish produced | | 432,208.00 |
| Cost per pound of fish produced | | $.26 |
| Feed conversion ratio | | 1.44 |

## HATCHERY IMPROVEMENTS

The major improvements to the hatchery were the installation of new windows in the duplex house and in houses 2 and 4.

## SPECIAL STUDIES

Hatchery personnel and equipment participated in a study initiated by Bob Bell, Regional Fishery Manager. The study consisted of jaw tagging 5,000, 9 to 10-in. fish for planting at the Bell Rapids access area on the Snake River.

A study was conducted over a 30-day period during the summer by G.W. Klontz from the University of Idaho. The study was an attempt to determine sources of proliferative kidney disease (PKD) in Riley Creek water. Tucker Springs side was also included in the study. Results of this study are still pending.

## MISCELLANEOUS ACTIVITIES

Hatchery personnel participated in the opening of upland game bird season by assisting in two days of patrol duty.

Numerous groups of high school and grade school students received tours of the hatchery. Other interested groups, including one with the Director, Commission members, and other Department officials, were also given tours.

Approximately 50,000 people visited the Hagerman Hatchery and WMA. Their activities included hatchery tours, fishing, and hunting as well as using the area for picnics. Overnight camping was not allowed this year. This met with approval from most visitors. The opening day of fishing season (March 1) was reported by observers to be the largest crowd ever. This heavy influx of people continued throughout the year.

## ACKNOWLEDGMENTS

Hatchery staffing during the year include: Robert Vaughn, Fish Hatchery Superintendent III; Bud Ainsworth, Fish Hatchery Superintendent III for four months; Fenton Hays, Fish Hatchery Superintendent II; Paul Smith, Fish Culturist; David May, Fish Culturist; Pat Landavazo, Laborer; Floyd Blackburn, Laborer; YCC crew for eight weeks; Terry Waitley, SYETP; Bill Fiscus, Fish Transport Operator; and Ralph Taylor, Fish Transport Operator.

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